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SEMICONDUCTOR DEVICE CONSISTING OF CYLINDRICAL MULTILAYER STRUCTURE

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Abstract of JP 2003086796 (A)

PROBLEM TO BE SOLVED: To provide a semiconductor device which effectively suppresses a short channel effect in high speed operation, high frequency γ emission and large current driving, etc. are made possible. **SOLUTION:** Related to a cylindrical multilayer structure 12 consisting of carbon elements, an inner cylindrical body 14 has a semiconductive behavior, and an outer cylindrical body 16 has a metallic behavior. A semiconductor device 10 comprises the multilayer structure 12, and the semiconductive behavior of the inner cylindrical body 14 of the multilayer structure 12 is controlled by the voltage applied to the outer cylindrical body 16. For that purpose, conductors 18 and 20 connected to the parts of the inner cylindrical body 14, opposite to each other with the outer cylindrical body 16 in-between, and a n -gate 22 for applying voltage to the outer cylindrical body 16, are provided.

